CLAIMS:

1. Polycrystalline alumina component with an additive characterized in that the alumina has an average crystal size $\leq 2\mu m$, and a relative density higher than 99.95% with a real in-line transmission RIT $\geq 30\%$ measured over an angular aperture of at most 0.5^0 at a sample thickness of 0.8mm and with a single wavelength of light λ, and that the additive comprises at least one of the substances from the group consisting of oxides of Mg, Y, Er and La.

2. Polycrystalline alumina component according to claim 1, characterized in that the additive is present in an amount of at least 10ppm.

3. Polycrystalline alumina component according to claim 1or 2, characterized in that the additive is Y_2O_3 in a quantity of at least 50ppm and at most 1000ppm.

4. Polycrystalline alumina component according to claim 1or 2, characterized in that the additive contains Er_2O_3 in a quantity of at least 50ppm and at most 5000ppm.

5. Polycrystalline alumina component according to claim 1or 2, characterized in that the additive is La_2O_3 in a quantity of at least 100ppm and at most 5000ppm.

6. Polycrystalline alumina component according to claim 1or 2, characterized in that the additive is MgO in a quantity of at least 100ppm and at most 1000ppm.

7. Discharge lamp characterized in that the lamp is provided with a discharge tube having a wall of a ceramic as claimed in any one of the preceding claims.

8. Lamp according to claim 6 characterized in that the discharge tube has an ionisable filling containing a metal halide.

9. Method for forming a polycrystalline alumina component as claimed in any one of the preceding claims characterized in that the process includes the steps of

- preparing a slurry of corundum power with a mean grain size $\leq 0.2\mu m$,
- adding a dopant, selected from a group formed by precursors containing one or more of the elements Mg, Y, Er and La and oxides of Mg, Y, Er and La,
- casting the slurry in a mould,
- drying and sintering of the moulded body thus formed, and
- performing a HIP treatment at a temperature of at least 1150^0C for at least 2 hours.

10. Method according to claim 6, 7 or 8 wherein after the addition of the dopant the prepared slurry is slip cast in a mould.